

1. (Twice amended) Targeted chimeric toxins comprising a genetically engineered molecule fused at the level of cDNA comprising at least one cell targeting [moieties] moiety encoding GnRH and adapted to recognize specific cells bearing gonadotropin releasing hormone binding sites and at least one cell killing moiety [moieties for recognizing and for destroying] adapted to kill specific cells bearing gonadotropin releasing hormone binding sites, wherein the at least one cell targeting [moieties] moiety consists essentially of gonadotropin releasing hormone and the at least one cell killing [moieties consist] moiety consists essentially of a cell killing toxin.

2. (Amended) Targeted chimeric toxins according to claim 1 wherein the specific cells bearing gonadotropin releasing hormone binding sites are at least one member selected from the group consisting of [selected from] malignant adenocarcinoma cells, benign uterine leiomyoma cells, endometrial island cells and pituitary tumor adenoma cells.

3. (Twice amended) Targeted fused chimeric toxins according to claim 1 produced by fusing at the cDNA level an oligonucleotide encoding 10 amino acids of a gonadotropin releasing hormone (GnRH) analog to a mutated DNA fragment of the full length Pseudomonas Exotoxin (PE), encoding the protein GnRH-PE66.

4. (Twice amended) Targeted fused chimeric toxins according to claim 1 produced by fusing at the cDNA level an oligonucleotide encoding 10 amino acids of a gonadotropin releasing hormone (GnRH) analog to a DNA fragment comprising domains II and III of the Pseudomonas Exotoxin (PE), encoding the protein GnRH-PE40.

5. (Twice amended) A method for the production of a targeted chimeric toxin [GnRH-PE66] as defined in claim 1, wherein said chimera comprises GnRH-PE66, comprising ligating an oligonucleotide encoding ten amino acids of a gonadotropin releasing hormone

Serial No. «Serial_Number»

(GnRH) analog upstream to a DNA fragment encoding a mutated form of PE, under conditions sufficient to produce a targeted chimeric toxin comprising GnRH-PE66.

C3
mt
11/11
6. (Twice amended) A method for the production of an [cancer] adenocarcinoma cell targeted chimeric toxin [GnRH-PE40] as defined in claim 1, wherein said chimera comprises GnRH-PE40, comprising ligating an oligonucleotide encoding ten amino acids of a gonadotropin releasing hormone (GnRH) analog upstream to a DNA fragment encoding domains II and III of the PE, under conditions sufficient to produce a targeted chimeric toxin comprising GnRH-PE40.

Claims 7 line 1 change "Pharmaceutical" to -A--; and line 3, change "claims" to --claim--.

C4
mt
11/11
9. (Twice amended) A method for [cancer] adenocarcinomas therapy in [animals by] a mammal comprising administering to the [patient's] body of a mammal in need of such therapy an effective amount of at least one chimeric toxin[s or their pharmaceutical compositions] as defined in claim[s] 1 sufficient to at least reduce the growth of said adenocarcinoma.

10. (Amended) A method for [cancer] adenocarcinoma therapy according to claim 9 [wherein the chimeric toxins are administered by] further comprising systemic administration of said chimeric toxin [or by trans cervical washing of the animal's endometrial cavity].

Claim 21, line 1 delete "a"; and line 2, change "toxin" to --toxins--.

C5
mt
11/11
22. (Amended) A method of treating a mammal having at least one adenocarcinoma [disease selected from the group consisting of cancer, endometriosis, uterine myomas, pituitary adenomas, BPH, and polycystic breast disease by] comprising administering